Attorney's Docket No.: 06975-200001 / Security 13 Applicant: Robert Bruce Hirsh

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#### <u>REMARKS</u>

Claims 20, 21, 24-28, 30-39, and 55-95 are pending, with claims 20, 67, and 81 being independent. No claims have been amended.

# 35 U.S.C. § 102(e)/§ 103(a) Cohen Rejections

Claims 20-21, 24-28, 30-39, and 55-95 have been rejected under 35 U.S.C. § 102(e) as being anticipated by or under 35 U.S.C. § 103(a) as being obvious over Cohen (U.S. Patent No. 6,178,511). For at least the following reasons, Applicant respectfully requests withdrawal of these rejections.

## Independent Claim 20 And Its Dependent Claims

Independent claim 20 relates to a "method, performed by an intermediary, of leveraging a persistent connection with a client to provide the client with access to a secured service," and recites, among other things, "authenticating the intermediary to the secured service, responsive to [a] request" by a client for access to the secured service and "enabling access by the client to the secured service conditioned on whether the intermediary is successfully authenticated to the secured service." Cohen fails to describe or suggest at least these features of claim 20.

Cohen describes a single sign-on (SSO) system in which a user signs on to the SSO system one time and the SSO system signs the user on to other applications. (Cohen at col. 2, lines 29-32). For each user, the SSO system securely stores that user's username, password, and other pertinent login information for each other application that the user may wish to access. (Id. at col. 4, line 61 to col. 5, line 6). This information has been previously entered into the SSO system by the user. (Id. at col. 5, lines 45-57). Once the user has logged in to the SSO system, the SSO system retrieves that user's usernames, passwords, and other login information for the other applications, and automatically logs the user in to the other applications without further user intervention. (Id. at col. 6, lines 8-45). The SSO system of Cohen thus provides a method of leveraging stored user information to enable user login to multiple applications. (Id. at col. 6, lines 46-48). Notably, in Cohen, the user login information is used to log the user into each application directly.

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Thus, Cohen fails to describe or suggest "authenticating the intermediary to the secured service," as claimed. That is, the intermediary of Cohen is never itself authenticated to the secured service. Rather, in Cohen, as indicated above, the user's credentials are always submitted to the secured service for authentication of the user, without regard for authentication of the intermediary SSO.

Moreover, Cohen fails to describe or suggest at least "authenticating the intermediary to the secured service, responsive to [a] request" by a client for access to the secured service, and "enabling access by the client to the secured service conditioned on whether the intermediary is successfully authenticated to the secured service." Rather, in Cohen, the SSO system (which the Office Action equates to the claimed intermediary) logs the user in to another application (which the Office Action equates to the claimed secured service) by using the user's username and password that has been previously entered and stored on the SSO system. The SSO system does not authenticate itself to the other application and enable access by the user to the other application conditioned on whether the SSO system is authenticated to the other application, as required by claim 20. Indeed, the SSO system of Cohen simply facilitates use of passwords previously stored by the user to automatically log a user in to another application.

For at least the foregoing reasons, claim 20, and its dependent claims 21, 24-28, 30-39, and 55-66 are patentable over Cohen.

Furthermore, and independently of the reasons articulated above with respect to claim 20, Applicant traverses the rejections of dependent claims 35, 36, 37, 55, 56, and 66 because the Examiner has improperly taken Official Notice that the following features are conventional and well known: "the use of a threshold number to limit use of authorization information" (claims 36 and 37); "the use of one-time passwords" (claim 37); "the use of client-server communications independent of an intermediary" (claims 55 and 56); and "the use of direct authentication by a user" (claim 66). Applicant respectfully submits that these features were not conventional and well known at the time of the invention, at least in the context of the claimed invention, and therefore respectfully requests a showing of documentary evidence of these features to the extent that a rejection of claims 35, 36, 37, 55, 56, and 66 is maintained. Applicant also respectfully

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submits that, to the extent these features were conventional and well known, the Office Action has provided no motivation or suggestion for making the proposed modifications to Cohen based on these features. For at least these additional reasons, Applicant respectfully requests the withdrawal of the rejections of claims 35, 36, 37, 55, 56, and 66.

### Independent Claim 67 And Its Dependent Claims

Independent claim 67 relates to a "method, performed by a client, of leveraging a connection with an intermediary to access a secured service" and recites, among other things, "receiving, from the intermediary, constrained authorization information that has been authenticated by the secured service, responsive to the client request" and "submitting, by the client, the constrained authorization information to the secured service to establish a direct authenticated connection between the client and the secured service independent of the authenticated connection between the client and the intermediary."

Cohen fails to describe or suggest at least these features of claim 67. As discussed in more detail above, Cohen describes a single sign-on (SSO) system in which a user signs on to the SSO system and the SSO system signs on to other applications on the user's behalf using the user's usernames and passwords that have been stored on the SSO system. In Cohen, the user does not receive constrained authorization information from the SSO system (which the Office Action equates to the claimed intermediary) that has been authenticated by the application (which the Office Action equates to the claimed secured service). The user also does not submit the constrained authorization information to the application to establish a direct connection with the application independent of the connection between the user and the SSO service. Rather, in Cohen the SSO system directly authenticates the user to the application by using the user's own stored username and password, and the user accesses the application through the connection that the user has established with the SSO service.

The Office Action acknowledges that Cohen fails to describe or suggest "submitting, by the client, the constrained authorization information to the secured service to establish a direct authenticated connection between the client and the secured service independent of the

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authenticated connection between the client and the intermediary." To show these features, the Office Action relies on its Official Notice "that the use of client-server communications independent of an intermediary was conventional and well known." Applicant submits that this use of Official Notice has two problems: (1) the Official Notice fails to meet the recited limitations for which Cohen is deficient and for which the Official Notice is relied upon; and (2) the features that were noticed are not believed to have been conventional and well known at the time of the invention, at least in the context of claim 67.

With respect to item (1), even accepting for the sake of argument that the Examiner's use of Official Notice is proper, the rejection of claim 67 is improper because the facts for which Official Notice is taken do not remedy the deficiencies of Cohen. The "use of client-server communications independent of an intermediary" does not meet the claim feature of "submitting, by the client, the constrained authorization information to the secured service to establish a direct authenticated connection between the client and the secured service independent of the authenticated connection between the client and the intermediary." That is, even if clients and servers were known to communicate without an intermediary, this does not mean that it would have been obvious to modify Cohen so that the user receives constrained authorization information from the SSO system and submits that information to the other application to enable communications between the client and the other application independent of the SSO system.

Indeed, Cohen teaches away from the proposed modification. Cohen teaches that the user accesses the application transparently through the SSO service by allowing the SSO service to automatically log the user into the application using the user's own username and password. In contrast, claim 67 recites that the client receives constrained authentication information from the intermediary and submits that information to establish a connection with the secured service independent of the intermediary. Only through the impermissible use of hindsight would it have been obvious to modify Cohen in the way proposed in the Office Action.

With respect to item (2), if Official Notice is to be relied upon for the proposition "that the use of client-server communications independent of an intermediary was conventional and

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well known," Applicant requests that the Examiner produce documentary evidence of these features.

For at least the foregoing reasons, claim 67, and its dependent claims 68-80, are patentable over Cohen.

Furthermore, Applicant traverses the rejection of dependent claims 73, 79, and 80 because the Examiner has improperly taken Official Notice that the following features are conventional and well known: "the use of a threshold number, a time window, and to received the information from the client attempting access to information, to limit use of authorization information" (claims 73); and "the use of direct authentication by a user" (claims 79 and 80). Applicant respectfully submits that these features were not necessarily conventional and well known at the time of the invention, at least in the context of the claimed invention. Absent documentary evidence of these features, the rejections of claims 73, 79, and 80 are improper. Moreover, Applicant respectfully submits that to the extent these features were conventional and well known, the Office Action has provided no motivation or suggestion for making the proposed modifications to Cohen based on these features. For at least these additional reasons, Applicant respectfully requests the withdrawal of the rejections of claims 73, 79, and 80.

# Independent Claim 81 And Its Dependent Claims

Independent claim 81 relates to a "method, performed by a secured service, of allowing a client access based on an authenticated connection between the client and an intermediary" and recites, among other things, "determining whether a trusted relationship exists between the secured service and the intermediary, responsive to the client request," and "conditioned on the existence of a trusted relationship between the secured service and the intermediary, enabling access by the client to the secured service."

Cohen fails to describe or suggest at least these features of claim 81. As discussed in more detail above, Cohen describes a single sign-on (SSO) system in which a user signs on to the SSO system one time and the SSO system signs on to other applications on the user's behalf using the user's usernames and passwords that have been stored on the SSO system. In Cohen,

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the application (which the Office Action equates to the claimed secured service) does not determine whether a trusted relationship exists between the application and the SSO system (which the Office Action equates to the claimed intermediary), and does not enable access by the user to the application conditioned on the existence of that trusted relationship. Rather, in Cohen, the application authenticates the <u>user's</u> username and password, which are provided by the SSO service and, conditioned on the acceptance of the <u>user's</u> username and password, allows the user to access the application through the SSO service.

The Office Action acknowledges that Cohen fails to describe or suggest these features of claim 81. To show these features, the Examiner takes Official Notice "that the use of 'trusted connections' was conventional and well known." Applicant submits that the taking of Official Notice is improper because: (1) the Official Notice fails to meet the recited limitations, for which Cohen is deficient and for which the Official Notice is relied upon; and (2) the features that were noticed are not believed to have been well known at the time of the invention, at least in the context of claim 81.

With respect to item (1), even accepting for the sake of argument that the Examiner's use of Official Notice is proper, the rejection of claim 81 is improper because the facts for which Official Notice is taken do not remedy the deficiencies of Cohen. The "use of 'trusted connections'" does not meet the claim features of "determining whether a trusted relationship exists between the secured service and the intermediary, responsive to the client request," and "conditioned on the existence of a trusted relationship between the secured service and the intermediary, enabling access by the client to the secured service." That is, even if it may have been known to use trusted connections, this does not mean that it would have been obvious to modify Cohen so that the application authenticates the SSO system and enables the user to access to the application based upon authentication of the SSO system.

Indeed, Cohen teaches away from the proposed modification. Cohen teaches that the other application receives the username and password for the user such that the application authenticates the user. The application of Cohen does not authenticate the SSO system itself, as required by claim 81. Only through the impermissible use of hindsight would it have been

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obvious to modify Cohen to authenticate the SSO system instead of the user, as proposed in the Office Action.

With respect to item (2), if Official Notice is to be relied upon for the proposition "that the use of 'trusted connections' was conventional and well known," Applicant requests that the Examiner produce documentary evidence of these features.

For at least the foregoing reasons, claim 81, and its dependent claims 82-95, are patentable over Cohen.

Furthermore, Applicant traverses the rejection of dependent claims 84, 87, 88, 89, 90, and 95 because the Examiner has improperly taken Official Notice that the following features are conventional and well known: "the use of a threshold number, a time window, and to received the information from the client attempting access to information, to limit use of authorization information" (claims 84 and 87); "the use of client-server communications independent of an intermediary" (claims 88 and 89); "the use of 'trusted connections'" (claim 90); and "the use of direct authentication by a user" (claim 95). Applicant respectfully submits that these features were not necessarily conventional and well known at the time of the invention, at least in the context of the claimed invention. Absent documentary evidence of these features, the rejections of claims 84, 87, 88, 89, 90, and 95 are improper. Moreover, Applicant respectfully submits that to the extent these features were conventional and well known, the Office Action has provided no motivation or suggestion for making the proposed modifications to Cohen based on these features. For at least these additional reasons, Applicant respectfully requests the withdrawal of the rejections of claims 84, 87, 88, 89, 90, and 95.

#### **Conclusion**

Applicant does not acquiesce to the characterizations of the art. For brevity and to advance prosecution, however, Applicant has not addressed all characterizations of the art, but reserves the right to do so in further prosecution of this or a subsequent application.

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Respectfully submitted,

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